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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,786	10/12/2001	Richard K. Golasky	016295.0706(DC-03140)	2229

7590

09/14/2004

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EXAMINER

MCCARTHY, CHRISTOPHER S

ART UNIT

PAPER NUMBER

2113

DATE MAILED: 09/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/976,786

Applicant(s)

GOLASKY ET AL.

Examiner

Christopher S. McCarthy

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2113

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-13 is/are allowed.
- 6) ☒ Claim(s) 1-6, 8, 14-16, 18, 21 and 22 is/are rejected.
- 7) ☒ Claim(s) 7, 17, 19 and 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☒ Other: Response to arguments

DETAILED ACTION

1. Claims 1-6, 8, 14-16, 18, 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Black U.S. Patent 6,708,265, as cited in prior office action, which was mailed on 5/6/2004.
2. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Black in view of *Microsoft Computer Dictionary*, as cited in prior office action, which was mailed on 5/6/2004.
3. Claims 9-13 are allowed, as cited in prior office action, which was mailed on 5/6/2004.
4. Claims 7, 17, 19, 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, as cited in prior office action, which was mailed on 5/6/2004.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-6, 8, 14-16, 18, 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Black U.S. Patent 6,708,265.

As per claim 1, Black teaches a computer system, comprising a host operable to interface with a network (column 15, line 55 – column 16, line 12); a primary storage device operable to interface with the network (column 16, lines 19-21), the primary storage device including first and second logical units, the first logical unit assigned to store data generated by the host (column 20, line 50 – column 21, line 39); and an agent module operable to communicate with the host and the primary storage device (column 17, lines 1-8; column 31, lines 18-29), the agent module further operable to detect a failure at the first logical unit (column 17, line 66 – column 18, line 1; column 5, lines 35-43); locate backup data from the first logical unit on a backup storage device (column 17, lines 64-66; column 17, lines 25-29); transfer the backup data from the backup storage device to the second logical unit (column 17, line 66 – column 18, line 1; column 17, lines 25-29); and map the second logical unit to a host address associated with the first logical unit in response to detecting the failure at the first logical unit (column 21, lines 30-39; column 22, lines 19-32; column 17, line 66 – column 18, line 1; column 18, lines 50-55; column 21, lines 30-39).

As per claim 2, Black teaches the computer system of claim 1, wherein the primary storage device comprises a redundant array of independent disks (RAID) device (column 16, lines 57-60; column 5, lines 53-59).

As per claim 3, Black teaches the computer system of claim 1, wherein the detecting comprises receiving notification from the primary storage device of the failure at the first logical

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unit (column 16, lines 35-39; column 18, lines 23-39; column 17, line 66 – column 18, line 1; column 5, lines 35-43).

As per claim 4, Black teaches the computer system of claim 1, wherein the address comprises a world wide name (WWN) (column 9, lines 62-67; column 21, lines 40-48).

As per claim 5, Black teaches the computer system of claim 1, wherein the backup storage device comprises a tape drive (column 10, lines 25-29).

As per claim 6, Black teaches the computer system of claim 1, further comprising the agent module operable to configure the second logical unit in response to detecting the failure (column 21, line 64 – column 22, line 10; column 20, line 50 – column 21, line 12).

As per claim 8, Black teaches the computer system of claim 1, wherein the network comprises a fibre channel network (column 16, lines 19-24).

As per claim 14, Black teaches a method for providing automatic data restoration after a storage device failure, comprising of detecting a failure at a first logical unit operable to store data associated with a host, the host operable to couple to a network (column 16, lines 5-49); configuring a second logical unit in response to detecting the failure at the first logical unit, the first and second logical units located on a first storage device operable to couple to the network (column 20, line 50 – column 21, line 29); transferring backup data associated with the first logical unit from a second storage device to the second logical unit (column 17, lines 25-29); and mapping the second logical unit to a host address associated with the first logical unit when the backup data transfer from the second storage device is complete (column 21, line 49 – column 22, line 32; column 17, line 66 – column 18, line 1; column 18, lines 50-55; column 21, lines 30-39).

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As per claim 15, Black teaches the method of claim 14, further comprising:
communicating the data between the host and the first logical unit via the network; and
communicating the backup data between the first logical unit and the second storage device via
the network (column 16, lines 5-44).

As per claim 16, Black teaches the method of claim 14, further comprising locating the
backup data associated with the first logical unit on the second storage device, the backup data
copied from the first logical unit to the second storage device prior to the failure (column 17,
lines 25-29; column 18, lines 36-39; column 17, lines 64-66).

As per claim 18, Black teaches the method of claim 14, wherein the second storage
device comprises a tape drive (column 17, lines 25-28).

As per claim 22, Black teaches the method of claim 14, further comprising
communicating the data via a fibre channel network (column 16, lines 19-24).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all
obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
such that the subject matter as a whole would have been obvious at the time the invention was made to a person
having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the
manner in which the invention was made.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Black in view of
Microsoft Computer Dictionary.

As per claim 21, Black teaches the method of claim 14. While Black does teach wherein
the SMAPP module does monitor the storage elements on the attached network (column 19, lines

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1-65), Black does not explicitly teach the detecting comprising of receiving an SNMP message. *Microsoft Computer Dictionary* does teach detecting comprising of receiving an SNMP message (page 414). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the SNMP protocol, as defined in the *Microsoft Computer Dictionary*, to the monitoring process of Black. One of ordinary skill in the art would have been motivated to use the SNMP protocol, as defined in the *Microsoft Computer Dictionary*, to the monitoring process of Black because the utilization of SNMP, as defined by *Microsoft Computer Dictionary*, enables a host to monitor the connections and actions of the devices on the network the host is connected thereon, a need explicitly expressed in Black.

Allowable Subject Matter

7. Claims 9-13 are allowed.
8. Claims 7, 17, 19, 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

9. Applicant's arguments filed 7/2/2004 have been fully considered but they are not persuasive.

With respect to claims 1 and 14, the applicant argues that Black fails to teach a computer system comprising "an agent module operable to ... map the second logical unit to a host address

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associated with the first logical unit in response to detecting the failure at the first logical unit.”

The examiner respectfully disagrees. Black teaches, in column 17, line 66 to column 18, line 1, that backup data is stored on another storage element and copied back to the primary storage element upon the necessity of the restoration of the data. Black also teaches, in column 18, lines 50-55, that this data is remapped within the same storage element. Furthermore, Black teaches, in column 21, lines 30-39, that a host address is associated with each unit of data in the primary storage element. Therefore, the first data unit is backed up onto a second storage element and, upon failure of the first data unit on the primary data storage is copied back onto a different unit of the primary storage element from the second storage element and is remapped so the host can utilize the data. This fulfills the amended and argued limitations of the present invention, and all applicable claims stand rejected.

Conclusion

10. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher S. McCarthy whose telephone number is (703)305-7599, and (571) 272-3651 after 10/15/2004. The examiner can normally be reached on M-F, 8 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoliel can be reached on (703)305-9713. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

csm

September 12, 2004


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